

Application Serial No. 09/494,067 - Filed January 28, 2000

IN THE CLAIMS

Claims 1-6, 8-19, and 21-42 are pending prior to the following amendments.

Please cancel claims 37-42.

Please amend claims 1-3, 9, 12, 13, 14, 16, 22, 25, 28 and 34 as indicated below.

1. (Currently Amended) A The method for combining multiple MPEG-encoded video streams, comprising of claim 4,
receiving the multiple MPEG-encoded video streams;
determining a value for a display position code corresponding to a display position of each
slice of each of the MPEG-encoded video streams;
modifying the value of the display position code of each slice of each of the received
MPEG-encoded video streams as necessary, and
interleaving each slice of each of the MPEG-encoded video streams as modified into a single
composite video stream;
wherein said display position code includes a first macroblock address increment variable length codeword having a first number of bits and wherein said modifying the display
position code of each slice of each of the MPEG-encoded video streams to be
modified comprises:
determining results in a modified second macroblock address increment variable
length codeword that having has a modified number of bits, said modified
number of bits modulo 8 which is equal to said first number of bits modulo
8; and
modifying the first macroblock address increment variable length codeword to be
equal to the second macroblock address increment variable length codeword.
2. (Currently Amended) The method for combining multiple MPEG-encoded video streams of claim 1, wherein said modifying the value of the display position code is performed at an end user location, display position code is at least one of a macroblock address increment variable length codeword and at least a byte of a slice startcode.

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3. (Currently Amended) The method for combining multiple MPEG-encoded video streams of claim 1 2, wherein the ~~multiple~~ MPEG-encoded video streams are selected by said end user from a ~~list of available video streams~~ are one of MPEG-1 encoded video streams and MPEG-2 encoded video streams.

4. (Previously Presented) A method for combining multiple MPEG-encoded video streams, said method comprising:

receiving the multiple MPEG-encoded video streams;
determining a value for a display position code corresponding to a display position of each slice of each of the MPEG-encoded video streams;
modifying the value of the display position code of each slice of each of the received MPEG-encoded video streams as necessary; and
interleaving each slice of each of the MPEG-encoded video streams as modified into a single composite video stream;
wherein said display position code includes a macroblock address increment variable length codeword, said macroblock address increment variable length codeword of each slice of each of the MPEG-encoded video streams contains 3 bits having a corresponding increment value of one of 2 and 3.

5. (Original) The method for combining multiple MPEG-encoded video streams of claim 4, wherein said modifying includes modifying the value of the macroblock address increment variable length codeword of each slice of each of the MPEG-encoded video streams to be modified to an increment value of between 22 and 33 inclusive.

6. (Original) The method for combining multiple MPEG-encoded video streams of claim 5, wherein said modifying includes modifying the 3 bits of said macroblock address increment variable length codeword as necessary and adding a byte to result in an 11-bit modified macroblock address increment variable length codeword.

7. (Canceled)

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8. (Original) The method for combining multiple MPEG-encoded video streams of claim 1, wherein said interleaving each slice of each of the MPEG-encoded video streams as modified into a single composite video stream is according to the display position code as modified of each slice of each MPEG-encoded video stream.

9. (Currently Amended) ~~A~~ The method for combining multiple MPEG-encoded video streams, ~~said method comprising:~~ of claim 4,

~~receiving the multiple MPEG-encoded video streams;~~
~~determining a value for a display position code corresponding to a display position of each~~
~~slice of each of the MPEG-encoded video streams;~~
~~modifying the value of the display position code of each slice of each of the received~~
~~MPEG-encoded video streams as necessary, and~~
~~interleaving each slice of each of the MPEG-encoded video streams as modified into a single~~
~~composite video stream;~~
wherein said MPEG-encoded video streams are MPEG-1 encoded video streams, and
wherein said display position code includes a macroblock address increment (MBAI) codeword, wherein said modifying the display position code of each slice of each of the MPEG-1 encoded video streams as necessary includes selectively adding a number of MBAI_stuffing codes, said number of MBAI_stuffing codes ranging from 0 to 7.

10. (Original) The method for combining multiple MPEG-encoded video streams of claim 9, wherein said number of MBAI_stuffing codes is determined such that the macroblock address increment codeword maintains bit-alignment of the display position code within a byte.

11. (Original) The method for combining multiple MPEG-encoded video streams of claim 9, wherein said macroblock address increment codeword has a first number of bits and wherein said modifying the display position code of each slice of each of the MPEG-encoded video streams to be modified results in a modified macroblock address increment codeword and a predetermined number of MBAI_stuffing codes, the modified macroblock address increment codeword and the

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predetermined number of MBAI_stuffing codes combine to having a modified number of bits, said modified number of bits modulo 8 is equal to said first number of bits modulo 8.

12. (Currently Amended) A The system for combining multiple MPEG-encoded video streams, comprising: of claim 17,

~~an interactive decoder adapted to determine a display position code for a display position of each slice of each of a received MPEG-encoded video streams and to modify the display position code of each slice of each of the received MPEG-encoded video streams as necessary, said interactive decoder further adapted to interleave each slice of each of the MPEG-encoded video streams as modified into a single composite video stream;~~

wherein said display position code includes a first macroblock address increment variable length codeword having a first number of bits and wherein said interactive decoder is further adapted to:

~~determine a second - modify the display position code of each slice of each of the MPEG-encoded video streams to be modified to result in a modified macroblock address increment variable length codeword that has having a modified second number of bits , said modified number of bits modulo 8 which is equal to said first number of bits modulo 8; and~~

~~modify the first macroblock address increment variable length codeword to be equal to the second macroblock address increment variable length codeword.~~

13. (Currently Amended) The system for combining multiple MPEG-encoded video streams of claim 12, further comprising a broadcast center for broadcasting the multiple MPEG-encoded video streams to said interactive decoder, said interactive decoder being located at an end user site.

14. (Currently Amended) A The system for combining multiple MPEG-encoded video streams, said system comprising: of claim 17,

~~an interactive decoder adapted to determine a display position code for a display position of each slice of each of a received MPEG-encoded video streams and to modify the display position code of each slice of each of the received MPEG-encoded video~~

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~~streams as necessary, said interactive decoder further adapted to interleave each slice of each of the MPEG-encoded video streams as modified into a single composite video stream;~~

wherein in modifying a display position code for a given slice, said interactive decoder is further adapted to:

~~determine a modified display position code which maintains a same bit alignment within a byte as an original display position code of said given slice; and modify the value of the original display position code to be equal to the modified display position code~~ maintain bit-alignment of the display position code within a byte.

15. (Original) The system for combining multiple MPEG-encoded video streams of claim 12, wherein said display position code is at least one of a macroblock address increment variable length codeword and at least a byte of a slice startcode.

16. (Currently Amended) The system for combining multiple MPEG-encoded video streams of claim 12 13, wherein said multiple MPEG-encoded video streams are selected by said end user from said list of available video streams wherein the MPEG-encoded video streams are one of MPEG-1 encoded video streams and MPEG-2 encoded video streams.

17. (Previously Presented) A system for combining multiple MPEG-encoded video streams, said system comprising:

an interactive decoder adapted to determine a display position code for a display position of each slice of each of a received MPEG-encoded video streams and to modify the display position code of each slice of each of the received MPEG-encoded video streams as necessary, said interactive decoder further adapted to interleave each slice of each of the MPEG-encoded video streams as modified into a single composite video stream;

wherein said display position code includes a macroblock address increment variable length codeword, said macroblock address increment variable length codeword of each slice

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of each of the MPEG-encoded video streams contains 3 bits having a corresponding increment value of one of 2 and 3.

18. (Original) The system for combining multiple MPEG-encoded video streams of claim 17, wherein said interactive decoder is further adapted to modify the value of the macroblock address increment variable length codeword of each slice of each of the MPEG-encoded video streams to be modified to have a corresponding increment value of between 22 and 33 inclusive.

19. (Original) The system for combining multiple MPEG-encoded video streams of claim 18, wherein said interactive decoder is further adapted to modify the 3 bits of said macroblock address increment variable length codeword as necessary and add a byte to result in an 11-bit modified macroblock address increment variable length codeword.

20. (Canceled)

21. (Original) The system for combining multiple MPEG-encoded video streams of claim 12, wherein said interactive decoder is further adapted to interleave each slice of each of the MPEG-encoded video streams as modified into a single composite video stream in accordance with the display position code, as modified, of each slice of each MPEG-encoded video stream.

22. (Currently Amended) A The system for combining multiple MPEG-encoded video streams, said system comprising: of claim 17,

~~an interactive decoder adapted to determine a display position code for a display position of each slice of each of a received MPEG-encoded video streams and to modify the display position code of each slice of each of the received MPEG-encoded video streams as necessary, said interactive decoder further adapted to interleave each slice of each of the MPEG-encoded video streams as modified into a single composite video stream;~~

wherein said MPEG-encoded video streams are MPEG-1 encoded video streams, and wherein said display position code includes a macroblock address increment (MBAI) codeword, wherein said interactive decoder is adapted to modify the display position

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code of each slice of each of the MPEG-1 encoded video streams as necessary by selectively adding a number of MBAI_stuffing codes, said number ranging from 0 to 7.

23. (Original) The system for combining multiple MPEG-encoded video streams of claim 22, wherein said interactive decoder is adapted to determine said number of MBAI_stuffing codes such that the macroblock address increment codeword maintains bit-alignment of the display position code within a byte.

24. (Original) The system for combining multiple MPEG-encoded video streams of claim 22, wherein said macroblock address increment codeword has a first number of bits and wherein said interactive decoder is adapted to modify the display position code of each slice of each of the MPEG-encoded video streams to be modified to result in a modified macroblock address increment codeword and a predetermined number of MBAI_stuffing codes, the modified macroblock address increment codeword and the predetermined number of MBAI_stuffing codes combine to have a modified number of bits, said modified number of bits modulo 8 is equal to said first number of bits modulo 8.

25. (Currently Amended) ~~An~~ The interactive decoder for combining multiple MPEG-encoded video streams, comprising: of claim 29,

~~means for determining a value for a display position code corresponding to a display position of each slice of each of a received MPEG-encoded video streams;~~
~~means for modifying the value of the display position code of each slice of each of the received MPEG-encoded video streams as necessary; and~~
~~means for interleaving each slice of each of the MPEG-encoded video streams as modified into a single composite video stream;~~
wherein said display position code includes a first macroblock address increment variable length codeword having a first number of bits and wherein said means for modifying the value of the display position code includes means for: determining a second modifying the display position code of each slice of each of the MPEG-encoded video streams to be modified generates a modified

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macroblock address increment variable length codeword that has having a modified second number of bits , said modified number of bits modulo 8 which is equal to said first number of bits modulo 8; and modifying the first macroblock address increment variable length codeword to be equal to the second macroblock address increment variable length codeword.

26. (Original) The interactive decoder for combining multiple MPEG-encoded video streams of claim 25, wherein said modifying means comprises means for modifying the value of the display position code to maintain bit-alignment of the display position code within a byte.

27. (Original) The interactive decoder for combining multiple MPEG-encoded video streams of claim 25, wherein said display position code is at least one of a macroblock address increment variable length codeword and at least a byte of a slice startcode.

28. (Currently Amended) The interactive decoder for combining multiple MPEG-encoded video streams of claim 25, wherein ~~said interactive decoder is located at an end user site, and wherein the multiple MPEG-encoded video streams are selected by said end user from a list of available video streams wherein said the MPEG-encoded video streams are one of MPEG-1 encoded video streams and MPEG-2 encoded video streams.~~

29. (Previously Presented) An interactive decoder for combining multiple MPEG-encoded video streams, said decoder comprising:

means for determining a value for a display position code corresponding to a display position of each slice of each of a received MPEG-encoded video streams; means for modifying the value of the display position code of each slice of each of the received MPEG-encoded video streams as necessary; and means for interleaving each slice of each of the MPEG-encoded video streams as modified into a single composite video stream;

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wherein said display position code includes a macroblock address increment variable length codeword having 3 bits with a corresponding increment value selected from the group consisting of 2 and 3.

30. (Original) The interactive decoder for combining multiple MPEG-encoded video streams of claim 29, wherein said modifying means includes means for modifying the value of the macroblock address increment variable length codeword of each slice of each of the MPEG-encoded video streams to be modified to have a corresponding increment value of between 22 and 33 inclusive.

31. (Original) The interactive decoder for combining multiple MPEG-encoded video streams of claim 30, wherein said modifying means includes means for modifying the 3 bits of said macroblock address increment variable length codeword as necessary and adding a byte to result in an 11-bit modified macroblock address increment variable length codeword.

32. (Canceled)

33. (Original) The interactive decoder for combining multiple MPEG-encoded video streams of claim 25, wherein said interleaving means interleaves each slice of each of the MPEG-encoded video streams as modified into a single composite video stream according to the display position code as modified of each slice of each MPEG-encoded video stream.

34. (Currently Amended) ~~An~~ The interactive decoder for combining multiple MPEG-encoded video streams, ~~said decoder comprising of claim 29,~~

~~means for determining a value for a display position code corresponding to a display position of each slice of each of a received MPEG encoded video streams;~~
~~means for modifying the value of the display position code of each slice of each of the received MPEG encoded video streams as necessary; and~~
~~means for interleaving each slice of each of the MPEG encoded video streams as modified into a single composite video stream;~~
wherein said MPEG-encoded video streams are MPEG-1 encoded video streams, wherein said display position code includes a macroblock address increment (MBAI)

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codeword, and wherein said modifying means modifies the display position code of each slice of each of the MPEG-1 encoded video streams as necessary including selectively adding a number of MBAI_stuffing codes, said number ranging from 0 to 7.

35. (Original) The interactive decoder for combining multiple MPEG-encoded video streams of claim 34, wherein said modifying means determines the number of MBAI_stuffing codes such that the macroblock address increment codeword maintains bit-alignment of the display position code within a byte.

36. (Original) The interactive decoder for combining multiple MPEG-encoded video streams of claim 34, wherein said macroblock address increment codeword has a first number of bits and wherein said modifying means modifies the display position code of each slice of each of the MPEG-encoded video streams to be modified to result in a modified macroblock address increment codeword and a predetermined number of MBAI_stuffing codes, the modified macroblock address increment codeword and the predetermined number of MBAI_stuffing codes combine to have a modified number of bits, said modified number of bits modulo 8 is equal to said first number of bits modulo 8.

37-42 (Cancelled).